REMARKS

Applicants respectfully request further examination and reconsideration in view of the arguments set forth fully below. Claims 1, 4-20, 23-34, 37-51, 54-66 and 69-85 were previously pending in this Application. Within the Office Action, Claims 1, 4-20, 23-34, 37-51, 54-66 and 69-85 have been rejected. By the above amendments, Claims 1, 20, 46, 84 and 85 have been amended, and Claims 86 and 87 have been added. Accordingly, Claims 1, 4-20, 23-34, 37-51, 54-66 and 69-87 are now pending in the application.

Objections to the Claims

Within the Office Action, Claim 46 is objected to for an informality. By the above amendments, the informality has been corrected. Thus, the objection should be withdrawn.

Rejections Under 35 U.S.C. § 103

Within the Office Action, Claims 1, 4-20, 23-34, 37-51, 54-66 and 69-85 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,341,316 to Kloba et al. (hereinafter "Kloba") in view of U.S. Patent Application Publication No. 20030217181 to Kiiskinen et al. (hereinafter "Kiiskinen"). The Applicant respectfully disagrees.

Kloba teaches a system, method, and computer program product for synchronizing content between a server and a client based on state information. Kloba teaches systems for enabling web content to be loaded on mobile devices, and for users of devices to operate with such web content on their mobile devices in an interactive manner while in an off-line mode. [Kloba, Abstract] Kloba teaches that the mobile device is placed into an adapter to synchronize a mobile client with a server. [Kloba, col. 5, lines 41-52] However, as is recognized within the Office Action, Kloba does not teach a middleware filter that filters the content in response to meta data within the content wherein the meta data comprises a data type of the content. Kloba instead teaches that selected content is modified/optimized based on meta tags. Further, Kloba does not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba does not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time in response to meta data within the content. Accordingly, Kloba does not teach the presently claimed invention.

Furthermore, Kloba also does not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Instead, as described above, Kloba

filters based on whether the content is already present on the client, not based on whether it is compatible with the client or the client is compatible with it. Indeed, within the Office Action it is recognized that the server of Kloba "receives multiple objects and [sends] only objects that have changed [and are therefore not already present on the client] to the client." [Office Action, page 8] Accordingly, Kloba does not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content.

Moreover, Kloba does not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time in response to meta data within the content. Instead, as described above, Kloba only teaches that the content is filtered once based on whether it is already present on the client, not twice by a server and then a middleware filter. Indeed, the whole purpose of Kloba is synchronization, thus the only filtration needed is to determine if the content is already on the client. In general, Kloba teaches a conventional data synchronization process where only data that is new or changed from the data already stored on a client is transmitted, thereby "synching" the client data to the source data. In this sense, the process of Kloba performs a single filtering process. In contrast, the presently claimed network and method implement a double filtering process. First is the conventional data synchronization step where the content server determines updated or new content to be sent to the client. Second is the further filtering of that determined content data, where this further filtering is performed by the middleware filter. This further filtering is performed on the actual data sent as part of the first filtering step (data synchronization). The actual data is physically received at the middleware filter, where it is selectively filtered to form filtered content. Accordingly, Kloba does not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time in response to meta data within the content.

Kiiskinen teaches a method and apparatus by which a user of two or more client devices each hosting a data store can have the data stores kept synchronized by a server in a way acceptable to the user even though at least one of the two data stores includes a data component that is not in the other data store. [Kiiskinen, Abstract] Kiiskinen further teaches that SyncML Commands act as containers for element types that describe the specifics of the SyncML command, including meta-information. [Kiiskinen, paragraph 34] Kiiskinen also teaches that data description elements are used as container elements for data exchanged in a SyncML message, and data description elements include the following element types: Meta, for specifying meta-information about the parent element type. [Kiiskinen, paragraph 39] Kiiskinen further

teaches an SFS filter for determining whether there are any problem fields (fields not in common) between two devices. Therefore, although Kiiskinen teaches SyncML messages including meta-information and data description elements used as container elements including meta-information about the parent element type, the filter taught by Kiiskinen does not filter the content in response to meta data within the content wherein the meta data comprises a data type of the content. Kiiskinen merely teaches that the SFS filter determines if there are fields not in common between the devices. Therefore, Kiiskinen does not teach a middleware filter that filters the content in response to meta data within the content wherein the meta data comprises a data type of the content. Further, Kiiskinen does not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kiiskinen does not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time in response to meta data within the content. Accordingly, Kiiskinen does not teach the presently claimed invention.

In contrast to the teachings of Kloba, Kiiskinen and their combination, the middleware filter agent of the presently claimed invention, selectively filters the content provided by the content server *in response to meta data contained within the content* such that only selected content is provided to a first network device. A content server provides content to the first network device during a data synchronization between the two devices. The middleware filter selectively filters the content provided by the content server such that selected content is provided to the first network device. The middleware filter is preferably included within a second network device coupled between the content server and the first network device. In this manner, the second network device acts as a proxy for the first network device to receive the content provided by the content server. In an alternative embodiment, the content server is coupled to the first network device, without the second network device coupled in between. The middleware filter is included within the content server, and the content is selectively provided from the middleware filter, on the content server, to the first network device. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. Additionally, Kloba, Kiiskinen and their combination do not

teach meta data containing device specifications. Kloba, Kiiskinen and their combination also do not teach the metadata comprising an attribute-value pair. Accordingly, Kloba, Kiiskinen and their combination do not teach the presently claimed invention.

The independent Claim 1 is directed to a network of devices to filter synchronized data. The network of devices of Claim 1 comprises a content server to store content, a first network device and a middleware filter coupled to the first network device and to the content server such that during a data synchronization, content is received by the middleware filter from the content server according to the data synchronization and the middleware filter is programmed to selectively filter the content resulting in filtered content and send only the filtered content to the first network device, wherein the middleware filter selectively filters in response to meta data within the content, wherein the meta data comprises a data type of the content. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. For at least these reasons, the independent Claim 1 is allowable over the teachings of Kloba, Kiiskinen and their combination.

Claims 4-19 are all dependent on the independent Claim 1. As described above, the independent Claim 1 is allowable over the teachings of Kloba, Kiiskinen and their combination. Accordingly, Claims 4-19 are all also allowable as being dependent on an allowable base claim.

The independent Claim 20 is directed to a network of devices to filter synchronized data. The network of devices of Claim 20 comprises a content server to store content, a personal digital assistant and a personal computer coupled to the personal digital assistant and to the content server, wherein the personal computer includes a middleware filter programmed such that during a data synchronization, content received by the personal computer from the content server according to the data synchronization is selectively filtered according to the middleware filter, resulting in filtered content, wherein only the filtered content is sent to the personal digital assistant by the personal computer, wherein the middleware filter selectively filters in response to meta data within the content, wherein the meta data comprises a data type of the content. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a

compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. For at least these reasons, the independent Claim 20 is allowable over the teachings of Kloba, Kiiskinen and their combination.

Claims 23-33 are all dependent on the independent Claim 20. As described above, the independent Claim 20 is allowable over the teachings of Kloba, Kiiskinen and their combination. Accordingly, Claims 23-33 are all also allowable as being dependent on an allowable base claim.

The independent Claim 34 is directed to a method of filtering synchronized data. The method of Claim 34 comprises determining content to be sent from a content server to a first network device during a data synchronization, sending the content from the content server to a second network device coupled between the content server and the first network device, wherein the second network device includes a middleware filter, selectively filtering the content according to the middleware filter in response to meta data contained within the content, wherein the meta data comprises a data type of the content and sending the filtered content from the second network device to the first network device. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. For at least these reasons, the independent Claim 34 is allowable over the teachings of Kloba, Kiiskinen and their combination.

Claims 37-50 are all dependent on the independent Claim 34. As described above, the independent Claim 34 is allowable over the teachings of Kloba, Kiiskinen and their combination. Accordingly, Claims 37-50 are all also allowable as being dependent on an allowable base claim.

The independent Claim 51 is directed to a method of filtering synchronized data. The method of Claim 51 comprises determining content to be sent from a content server to a first network device during a data synchronization, wherein the content server includes a middleware filter, selectively filtering the determined content according to the middleware filter in response to meta data contained within the content, wherein the meta data comprises a data type of the content and sending the filtered content from the content server to the first network device. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that

filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. For at least these reasons, the independent Claim 51 is allowable over the teachings of Kloba, Kiiskinen and their combination.

Claims 54-65 are all dependent on the independent Claim 51. As described above, the independent Claim 51 is allowable over the teachings of Kloba, Kiiskinen and their combination. Accordingly, Claims 54-65 are all also allowable as being dependent on an allowable base claim.

The independent Claim 66 is directed to an apparatus to filter synchronized data wherein the apparatus includes a middleware filter programmed such that during a data synchronization, content is received by the apparatus from a content server according to the data synchronization, and the received content is selectively sent to a network device by the apparatus according to the middleware filter, wherein the received content is selectively sent in response to meta data within the selected content, wherein the meta data comprises a data type of the content. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. For at least these reasons, the independent Claim 66 is allowable over the teachings of Kloba, Kiiskinen and their combination.

Claims 69-82 are all dependent on the independent Claim 66. As described above, the independent Claim 66 is allowable over the teachings of Kloba, Kiiskinen and their combination. Accordingly, Claims 69-82 are all also allowable as being dependent on an allowable base claim.

The independent Claim 83 is directed to an apparatus for filtering synchronized data. The apparatus of Claim 83 comprises means for determining content to be sent from a content server to a first network device during a data synchronization, means for sending the content from the content server to a second network device coupled between the content server and the first network device, wherein the second network device includes a middleware filter, means for selectively filtering the content in response to meta data contained within the content, wherein the meta data comprises a data type of the content and means for sending the filtered content

from the second network device to the first network device. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. For at least these reasons, the independent Claim 83 is allowable over the teachings of Kloba, Kiiskinen and their combination.

The independent Claim 84 is directed to a network of devices to filter synchronized data. The network of devices of Claim 84 comprises a content server to store content, a first network device, wherein a communications channel is established for communicating content from the content server to the first network device and a middleware filter coupled to the first network device and to the content server such that during a data synchronization, all content sent over the communications channel from the content server is received by the middleware filter according to the data synchronization, and the middleware filter is programmed to selectively filter the content in response to meta data containing device specifications within the content resulting in filtered content and send only the filtered content to the first network device, wherein the meta data comprises a data type of the content. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. Additionally, Kloba, Kiiskinen and their combination do not teach meta data containing device specifications. For at least these reasons, the independent Claim 84 is allowable over the teachings of Kloba, Kiiskinen and their combination.

The independent Claim 85 is directed to a network of devices to filter synchronized data. The network of devices of Claim 85 comprises a content server to store content, a first network device and a second network device coupled between the first network device and the content server, the second network device comprising a middleware filter, such that during a data synchronization, content is received by the middleware filter from the content server according to the data synchronization and the middleware filter is programmed to selectively filter the content

in response to meta data within the content, the metadata comprising an attribute-value pair, resulting in filtered content and send only the filtered content to the first network device, wherein the meta data comprises a data type of the content, and further wherein the first network device and the second network device are local and the content server is remote from the first network device and the second network device. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. Additionally, Kloba, Kiiskinen and their combination do not teach the metadata comprising an attribute-value pair. For at least these reasons, the independent Claim 85 is allowable over the teachings of Kloba, Kiiskinen and their combination.

New Claims

Although Kloba teaches syncing as mirroring data on a client and a server or overwriting data on a client or on a server, Kloba does not teach a bi-directional data synchronization. Kiiskinen also does not teach bi-directional data synchronization. Therefore, Kloba, Kiiskinen and their combination do not teach bi-directional data synchronization.

The independent Claim 86 is directed to a method of filtering synchronized data. The method of Claim 86 comprises determining content to be sent from a content server to a first network device during a bi-directional data synchronization, sending the content from the content server to a second network device coupled between the content server and the first network device, wherein the second network device includes a middleware filter, selectively filtering the content according to the middleware filter in response to meta data contained within the content, wherein the meta data comprises a data type of the content and sending the filtered content from the second network device to the first network device. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data.

Additionally, Kloba, Kiiskinen and their combination do not teach bi-directional data synchronization. For at least these reasons, the independent Claim 86 is allowable over the teachings of Kloba, Kiiskinen and their combination.

The independent Claim 87 is directed to a network of devices to filter synchronized data. The network of devices of Claim 87 comprises a content server to store content, a first network device and a middleware filter coupled to the first network device and to the content server such that during a bi-directional data synchronization, content is received by the middleware filter from the content server according to the bi-directional data synchronization and the middleware filter is programmed to selectively filter the content resulting in filtered content and send only the filtered content to the first network device, wherein the middleware filter selectively filters in response to meta data within the content, wherein the meta data comprises a data type of the content. As described above, Kloba, Kiiskinen and their combination do not teach a middleware filter that filters the content in response to meta data within the content. Further, Kloba, Kiiskinen and their combination do not teach a content is filtered by a middleware filter based on a compatibility of a first network device and the content. Moreover, Kloba, Kiiskinen and their combination do not teach that a content server first filters a content to determine the data that needs to be synchronized (i.e. what has changed), then a middleware filter filters the synchronization content a second time based on meta data. Additionally, Kloba, Kiiskinen and their combination do not teach bi-directional data synchronization. For at least these reasons, the independent Claim 87 is allowable over the teachings of Kloba, Kiiskinen and their combination.

For the reasons given above, the applicant respectfully submits that the claims are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
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